

REMARKS

Applicants thank the Examiner for the consideration given the present application. Upon entry of the claims amendments herein, Claims 1 and 7-23 will be pending. Claims 1 and 7 have been amended and Claims 2-6 have been cancelled.

In particular, Claim 1 has been amended to add the words "ready-to-drink beverage," and "c) at least about 50% water." Support for these amendments is found in Claim 6 as originally filed.

Claim 7 has been amended to modify its dependency.

The Rejection under 35 U.S.C. § 103(a)

The Examiner has rejected Claims 1-23 under 35 U.S.C. § 103(a) as being obvious in light of several references. Specifically, the Examiner has rejected Claims 1-3 over Josephson et al., U.S. Patent No. 5,336,506, issued on August 9, 1994 (herein "Josephson"); Claims 1-3 over McAnalley et al., WO 98/06418, issued on February 19, 1998 (herein "McAnnaley"); and Claims 1-23 over Wang et al., U.S. Patent No. 6,004,610, issued on December 21, 1999 (herein "Wang"), in view of Gandhi, U.S. Patent No. 5,851,578, issued on December 22, 1998 (herein "Gandhi"). Applicants respectfully traverse these rejections.

A. Synopsis of the Present Invention

As amended herein, the present invention relates to beverage compositions comprising a combination of arabinogalactan and minerals, such as, for example, zinc, iron, magnesium and calcium. Mineral stability can be a serious problem when formulating beverage compositions with minerals, causing such formulation to be either unfeasible or unacceptable due to insolubility and, ultimately, instability of the desired mineral supplement. In such beverage compositions, the mineral will ultimately settle to the bottom of the container holding the composition. To prevent this, stabilizing compositions, as well as additional mechanisms such as complexing agents, are often incorporated, especially when calcium is introduced into the composition. *See* Barey, U.S. Patent No. 5, 866,190, issued February 2, 1999.

It is additionally well known that before the present invention, delivery of adequate levels of dietary fiber and minerals was a challenge that needed to be solved. For instance, providing a composition containing one or more minerals (*e.g.*, calcium) and one or more soluble dietary fibers (*e.g.*, pectin or psyllium) causes problems such as gelling, increased viscosity, flocculation, separation, and decreased mineral bioavailability.

An additional problem related to mineral-supplementation of beverage compositions relates to problematic organoleptic properties associated with such minerals, such as significant

off-flavors. Such problems are readily apparent to the consumer and will often preclude the consumer from ingesting a mineral-supplemented composition.

The present invention surprisingly overcomes the aforementioned problems traditionally associated with fiber and mineral compositions through a combination of a fiber known as arabinogalactan and one or more minerals. Arabinogalactan fiber is useful for providing a dietary fiber benefit to the consumer, as well as additional benefits in the field of immune function. It is therefore quite exciting that this fiber may be used not only to provide these benefits, but also to overcome problems associated with mineral and fiber interactions, stabilization of minerals, and organoleptic properties of these minerals. In addition, use of a fiber to attempt this purpose would ordinarily result in increased viscosity and likely unacceptability of the final beverage product. However, it has further been found that the arabinogalactan fiber is not precluded from use due to any problems associated with viscosity. In fact, the beverage compositions of the present invention, as amended herein, provide excellent viscosity, which is acceptable to the consumer.

B. The Prior Art

The Examiner begins by rejecting Claims 1-3 over each of Josephson and McAnalley. Josephson generally teaches a method for targeting a therapeutic agent to a specific population of cells, wherein in one embodiment, a complex of a therapeutic agent containing iron and arabinogalactan may be formed to carry out this purpose. The compositions of Josephson are generally in powder form.

McAnalley generally teaches dietary supplements which may include arabinogalactan and minerals. The supplements of McAnalley are tablets, capsules, liquid suspensions, caplets and lotions, but may additionally be formulated appropriately for other modes of use.

The Examiner next rejects Claims 1-23 over Wang in view of Gandhi. In general, Wang teaches beverage compositions enriched with arabinogalactan and guar gums, while Gandhi discloses beverage compositions containing guar gums, other low viscosity gums, and minerals.

C. The Argument

In view of the amendments herein, Applicants respectfully assert that the rejection of Claims 1-3 over both Josephson and McAnalley have been obviated by the fact that the present invention is now directed only to ready-to-drink beverage compositions. Neither reference teaches or suggests formulating the disclosed ingredients into a beverage composition, much less a *stable* beverage composition, which is the surprising and unexpected benefit of the present invention as amended herein, *i.e.* that a fiber and mineral combination can be made into a stable beverage composition. Moreover, the Examiner has not made such an assertion. Claim 1, as

amended herein, now includes the limitation of original Claim 6, which was not rejected over Josephson or McAnalley. Thus, the Examiner seemingly agrees that these two references do not teach or suggest the ready-to-drink beverages of the present invention. In light of this deficiency, Applicants respectfully request withdrawal of these rejections.

With regard to the one remaining rejection over the combination of Wang, in view of Gandhi, Applicants respectfully assert that the Examiner's burden of establishing a prima facie case of obviousness has not been satisfied. To establish a prima facie case of obviousness under 35 U.S.C. §103, the Examiner must meet three basic criteria. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest *all* the claim limitations. See, for example, In re Vaeck, 947 F.2d 488 (Fed. Cir. 1991). Applicants respectfully assert that the Office Action fails to establish any of these criteria, and thus, fails to set forth a prima facie case of obviousness under 35 U.S.C. § 103.

1. No Suggestion or Motivation to Modify the Reference or Combine Reference Teachings

First, Applicants respectfully assert that there is no suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. See *In re Mills*, 916 F.2d 680 (Fed. Cir. 1990). Applicants respectfully assert there is nothing in the prior art that suggests the desirability of the present invention.

As aforementioned, the Examiner cites Wang, in view of Gandhi, against Claims 1-23. Specifically, the Examiner states that Wang discloses a beverage and a dry beverage composition containing a blend of arabinogalactan and guar gum, however, the Examiner admits that Wang does not disclose the incorporation of minerals into the compositions. Gandhi allegedly corrects the deficiencies in Wang, by disclosing powder or beverage compositions containing minerals and either guar gum, or other low viscosity gums. The Examiner argues that arabinogalactan fits the definition of a "low viscosity gum" described in Gandhi, so therefore, it would have been obvious to use arabinogalactan and minerals from Gandhi in the beverage compositions of Wang. Applicants respectfully disagree with these presumptions.

As discussed above, it is known in the art that fiber/mineral beverages are difficult to formulate due to issues of stability and unfavorable organoleptic properties. *See* Barey, U.S. Patent No. 5,866,190. Until the present inventors surprisingly discovered that these problems could be overcome by combining a particular amount of arabinogalactan with one or more minerals, there was no indication in the art that such a formulation could successfully be produced. Moreover, Gandhi may arguably disclose the inclusion of low viscosity gums, but it fails to teach arabinogalactan. Thus, because of this absence of arabinogalactan in Gandhi, there would be no motivation for one skilled in the art to combine these references in the first instance.

Moreover, Applicants respectfully assert that there is no teaching or motivation to combine these references because each reference actually teaches a different composition. Wang teaches beverages having a fiber blend containing *both* arabinogalactan and guar gum. In contrast, Gandhi teaches beverages having *either* guar gum or other low viscosity gum. There would be no reason for one skilled in the art to combine Wang and Gandhi because Wang teaches the arabinogalactan and guar gum as necessary components while Gandhi teaches them as alternative to one another. Thus, for this further reason, Applicants respectfully assert that there would be no motivation to combine the references.

Even assuming for the sake of argument, that one skilled in the art was motivated to combine the references in the first instance, Applicants respectfully assert that there is no teaching or suggestion to modify the reference teachings. Neither reference suggests that formulating a stable beverage composition from the ingredients disclosed therein is desirable, or in light of the teaching of Barey, even possible. Therefore, one skilled in the art would not be motivated to modify the references to formulate a stable beverage composition containing both arabinogalactan and minerals. Thus, Applicants respectfully assert that there is no teaching or suggestion in Wang, in view of Gandhi, to combine or modify reference teachings.

In view of the foregoing, Applicants respectfully assert that the first requirement for establishing a *prima facie* case of obviousness has not been satisfied.

2. No Reasonable Expectation of Success

Second, Applicants respectfully assert that the references fail to provide any reasonable expectation of success. As discussed above, until the present inventors surprisingly discovered that a stable beverage composition could be formulated that includes arabinogalactan and minerals, it was not known in the art to be possible. Thus, Applicants respectfully assert that since it is known in the art that stable arabinogalactan/mineral beverages are difficult to formulate, and since neither of the cited references even addresses this problematic issue, the combination of Wang in view of Gandhi fails to provide the requisite reasonable expectation of success.

Therefore, Applicants respectfully assert that the second requirement for establishing a prima facie case of obviousness has not been satisfied.

3. No Teaching of All Claim Limitations

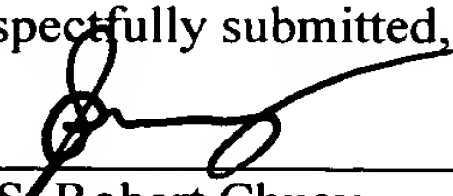
Finally, Applicants respectfully assert that the prior art references when combined do not teach or suggest *all* the claim limitations. Wang fails to teach the incorporation of minerals into an arabinogalactan composition. Similarly, Gandhi fails to teach the inclusion of arabinogalactan in an mineral fortified composition. As discussed above, there is no teaching or suggestion that these references should be combined or modified. Therefore, these references fail to teach *all* of the claim limitations of the present invention as amended herein. Thus, Applicants respectfully assert that the third requirement for establishing a prima facie case of obviousness has not been satisfied.

Therefore, Applicants respectfully assert that the Office Action fails to satisfy the criteria for establishing a prima facie case of obviousness under 35 U.S.C. § 103 (a), which requires that there be some suggestion or motivation to modify the reference or combine reference teachings, that there must be a reasonable expectation of success, and that the prior art reference (or references when combined) must teach or suggest *all* the claim limitations. Because the cited art fails to teach or motivate one skilled in the art to formulate the stable arabinogalactan/mineral beverage composition of the present invention, Applicants respectfully assert that a prima facie case of obviousness has not been established.

CONCLUSION

In view of the foregoing, it is respectfully submitted that the Examiner's rejection of Claims 1-23 under 35 U.S.C. § 103(a) is improper. Reversal of such rejection is therefore respectfully requested.

Respectfully submitted,

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